



Maine Farm Safety Program

Bulletin #2293

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Hearing Protection for Farmers

Loud noise is the most common cause of permanent hearing loss. Noise-induced hearing loss does not heal and cannot be corrected by hearing aids. No one is ever too young or old to suffer from the effects of hearing loss from noise. Protect your hearing by wearing the right personal protective equipment. Ear-muffs, earplugs and canal caps can all reduce the amount of noise exposure.

◆ **Awareness**

Make sure that everyone at home or on the farm understands the effects of noise. Tell the whole family that noise exposure can damage hearing. Space out or shorten noise-related activities. This gives your ears a rest and reduces general daily exposure. Household appliances, power tools, recreational vehicles and loud music can all damage hearing. The louder the noise and the greater the length of exposure, the greater the chance of permanent hearing loss.

◆ **Hearing Tests**

Anyone in the family experiencing hearing difficulties should be tested so existing problems can be identified and monitored. Remember that some hearing disorders may not be noise related. A complete examination and evaluation by a professional can help you determine the cause.

Hearing Protection

- ◆ **Have hearing protection devices available at the work site.**
- ◆ **Consider quiet operation when buying any motorized equipment.**
- ◆ **If you have to yell to someone three feet away, you should be wearing hearing protection.**



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◆ **Hearing Protection Devices**

Some sort of hearing protection should be worn when working around loud noise. Some people prefer earmuffs because they are easy to take off and put back on. To be effective, earmuffs need to seal well around the ear. Some people find earmuffs more comfortable than earplugs, but they are bulkier and may increase perspiration in warm weather. Glasses, long sideburns, long hair, and facial movements

(such as chewing gum) can reduce earmuff protection. However, special equipment is available for use with glasses or beards.

Noise-induced hearing loss does not heal and cannot be corrected by hearing aids.

Earplugs are available as pre-formed, rubber or plastic inserts fitted to the user's ears, and as hand-formed inserts of disposable materials such as wax, foam, or "Swedish wool." Plugs must fit well to work well and must be cleaned often to prevent ear infections. These can be worked loose with jaw movement. Those wearing earplugs regularly should consider having them custom fitted. Inexpensive wax or fiber inserts are for temporary protection; discard them after use. Ordinary cotton won't work and shouldn't be used as a hearing protector.

◆ **Hearing Protection Rules**

Here are general guidelines to remember about hearing protection:

- ✓ Use hearing protection on all noisy jobs.
- ✓ Be protected the minute the activity begins.
- ✓ Regard quiet operation as a "plus" value when shopping for tractors, machinery or other equipment. (This includes household appliances.)
- ✓ Keep machinery and equipment well lubricated and maintained. Regularly tighten all components.
- ✓ Replace defective mufflers and exhaust system parts. Do not use a "straight pipe" exhaust for tractors or any other engines. It does not increase power very much and often emits sound levels that can damage hearing.
- ✓ Sometimes noise from stationary equipment can be reduced by enclosing noisy components or building acoustic barriers or heavy partitions.
- ✓ Stay away from noise when you don't need to control or tend the equipment.
- ✓ Limit the duration of noise exposure if you are without hearing protection. Put yourself and your ears as far away from a noise source as possible.



◆ Noise and Your Health

Noise can affect health in many ways. It can quicken pulse rate, increase blood pressure and narrow blood vessels. Over a long period of time, these may place an added burden on the heart. Noise can also cause abnormal secretions of

hormones and tensing of muscles. People who deal with noise every day may complain of nervousness, sleeplessness and fatigue. Job performance may also suffer when people are exposed to high levels of noise.

Sound Ratings and the Danger Zone

Here is a list of sounds common on the farm. They range from very soft to extremely loud. The number in front of each example is the typical decibel.

Decibel Example of Sound

- 0** Lowest sound audible to the human ear.
- 30** Crickets, distant frogs, whisper.
- 40** Kitten meowing, song birds, distant dog bark.
- 50** Refrigerator running, babbling trout stream, quiet empty barn.
- 60** Average conversation level.
- 70** Chicken coop, busy restaurant. At this decibel level, noise may begin to affect your hearing if you're exposed to it over the long term.

Remember, if you have to shout, yell or speak loudly to talk to someone who is three feet away, you are working around noise levels that dictate hearing protection.

Decibel Example of Sound

The Danger Zone

- 80** Tractor idling, barn cleaner, conveyers, elevators. These noises can damage hearing if exposure to them is for more than eight hours continuously.
- 90** Tractor at 50% load, blower, compressor, combine. As loudness increases, the "safe" exposure time decreases; damage can occur in less than eight hours.
- 100** Tractor at 80% load, pig squeal, power tools. Even two hours of exposure can be dangerous. With each 5 decibel increase, the "safe time" is cut in half.
- 120** Tractor at full load, bad muffler, old chain saw. The danger is immediate.
- 140** Gunshot, back-fire, dynamite blast. Any length of exposure time is dangerous. At this level, the noise may actually cause pain in the ear.



This Maine Farm Safety Fact Sheet is part of an educational fact sheet series produced by the University of Maine Cooperative Extension. For more information on farm safety, contact your county Extension office.



Published and distributed in furtherance of Acts of Congress of May 8 and June 30, 1914, by the University of Maine Cooperative Extension, Vaughn H. Holyoke, Director for the University of Maine Cooperative Extension, the Land Grant University of the state of Maine and the U.S. Department of Agriculture cooperating. Cooperative Extension and other agencies of the U.S.D.A. provide equal opportunities in programs and employment. 7/95



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